Abstracts from Medical Literature.

PÆDIATRICS.

Anoxia and Fœtal Anomalies.

THEODORE H. INGALLS *et alii* (*American Journal of Diseases of Children*, July, 1950), continuing their work on noxious influences during pregnancy, have demonstrated the effect of maternal anoxia on the offspring of the white mouse. Animals at various stages of pregnancy were submitted to rarefied atmospheres. The anoxia resulted in fœtal death or congenital anomalies, the effect on the fœtus varying with the degree of anoxia and the stage of pregnancy at which it occurred. The most severe degree of anoxia caused fœtal death. Two congenital anomalies that were repeated were anencephaly occurring in litters exposed on the eighth day of pregnancy, and cleft palate in those exposed on the thirteenth or fourteenth day. The authors state that these findings add confirmation to the view already strongly held that the tissue most sensitive to damage is that which is in the most active stage of primitive development, and that there is a critical period for many congenital lesions.

Problems in Children of Average or Superior Intelligence.

ANNA-LISA ANNELL (*The Journal of Mental Science*, October, 1949) states that a transient deterioration in school work during adolescence is very common and that the conflicts of puberty are often felt particularly intensely by gifted, intellectually well-differentiated children. She classes the children into several groups. The sub-vital asthenic children become tired only late in the evening and take some time to fall into a deep sleep; they wake heavily and are fully efficient only some hours later; their school efficiency and their appetite are poor in the morning. The ixothymic (sticky) type have slow processes of thinking and some intellectual rigidity, finding difficulty in changing rapidly from one train of thought to another; better achievement has resulted from studying one subject for a day or a week at a time. Children with motor disturbances, due to immaturity, disturbances of internal secretions or the sequelæ of organic diseases, form another group; sometimes these are associated with mental backwardness, for example, in speech; others result from mild hypopituitary dysfunction and the slowness results in difficulties with gymnastics and in writing from dictation. The asthenic type are affected with fatigability, while others have increased muscular tension. The author states that understanding of the physical limitations peculiar to individual children will enable better use to be made of their innate abilities.

Hoarseness in Children.

J. M. LORÉ (*Archives of Otolaryngology*, June, 1950) discusses 56 children, aged fourteen years or less, suffering from speech disorders; 19 had laryngeal abnormalities and 17 had lesions of the true vocal cords, 14 being thickenings and polypoid changes which were bilateral in six. Two had multiple papillomata, bilateral in both cases, one had a small band at the anterior commissure, one œdematous ventricular bands and one loose corniculate and cuneiform cartilages which tended to be drawn into the larynx on inspiration. There was a history of respiratory infection, enlarged tonsils and adenoids or deviation of the nasal septum in a large proportion of the cases. If the thickening of the vocal cord was minimal, conservative treatment was instituted. This included functional rest and the use of medications for treatment of the larynx, nose and sinuses. In only one of the 19 cases could the patient be regarded as cured by this method. Several others showed some improvement. The remainder were advised to undergo some surgical procedure. Only six submitted, two with multiple papillomata and four with polyposis. In the laryngeal operation the stripping technique was employed. Under general anæsthesia and through an anterior commissure laryngoscope, the growth was seized and stripped away *in toto*. Only one cord was treated at a time in order to avoid web formation. When necessary the other cord was stripped one month later. The patients were allowed to use the voice immediately after the operation. Maximum improvement was attained in about one month. After operation the patients were treated by a speech therapist to ensure proper use of the voice.

Wilms's Tumour.

ROBERT E. GRASS and EDWARD B. D. NEUHAUSER (*Pediatrics*, December, 1950) discuss the treatment of embryoma of the kidney. They state that the cells of these very malignant tumours may be undifferentiated, or may form primitive epithelium, muscle, bone or cartilage. They arise presumably from an embryonic rest within the kidney and may grow to a very large size without rupturing the renal capsule and so without invading adjacent structures. Abdominal distension or the finding of a mass in the abdomen is usually the first warning, but hæmaturia occasionally occurs and is of bad omen. Pain is unusual. Pyelography shows the pelvis of the kidney pushed to one side of the mass, distorted and displaced. It may be difficult to distinguish embryoma from neuroblastoma, which has a more "pebbly" surface and a greater tendency to cross the mid-line. If metastasis has occurred, it tends to be to the lungs from an embryoma and to the bones from a neuroblastoma. Cures have been reported by treatment with irradiation alone, nephrectomy alone and a combination of the two. A survey of all cases occurring in the Children's Hospital of Boston since 1914 shows a very great improvement in survival rate. In the period from 1914 to 1930, when treatment was somewhat haphazard, the survival rate was 14·9%. In the period from 1931 to 1939, when William Ladd improved the operative management, paying attention to proper treatment of shock and suitable anæsthesia, and using a transabdominal approach to facilitate removal of large growths and early ligation of renal vessels, the survival rate rose to 32·2%. During the period from 1940 to 1947 the survival rate has been 47·3%. The operative management has been essentially the same. Post-operative irradiation has been the rule; it is commenced as soon as the operation is completed and before the patient recovers from the anæsthesia. Pre-operative irradiation has not been used; it does reduce the size of the tumour and so facilitates operation, but it necessitates delay in operation, causes liquefaction of the tumour mass and may increase the risk of metastasis. Intensive irradiation of any infiltrating tumour left in the abdomen or of small lung metastases seems worth while. The results with infants under the age of one year are much better than with older children, perhaps because infants' abdomens are felt more often by mothers and physicians and so diagnosis may be made earlier.

Sequelæ of Neo-natal Asphyxia.

W. A. B. CAMPBELL, E. A. CHEESEMAN and ANNE W. KILPATRICK (*Archives of Disease in Childhood*, December, 1950) report a follow-up of the children born in the Royal Maternity Hospital, Belfast, during the years 1938 to 1941 with severe *asphyxia neonatorum* (89 children) and of a group of unselected controls (178 children). Subjects included in the asphyxia group were those who as babies suffered from *asphyxia pallida* or *livida* lasting for a stated period of over two minutes. The authors state that after the making of due allowance for relevant concomitant factors, no significant difference has been found in the average physical measurements (height, weight, inspired chest measurement and chest expansion) or in hæmoglobin levels or in intelligence distributions (as assessed from Raven's matrices) between the asphyxia and the control group. This survey gives no support for the hypothesis that *asphyxia neonatorum* is a common cause of later physical or mental retardation.

Survival of Premature Infants.

MORRIS STEINER and WILLIAM POMERANCE (*Pediatrics*, December, 1950) have investigated the survival rate among 791 liveborn premature infants born in the Jewish Hospital of Brooklyn from 1941 to 1945. They found that the survival rate varied directly with fœtal maturity and birth weight, but for any given weight group the outlook for the infant improved in proportion to the degree of its maturity. This was specially striking in infants weighing less than 1500 grammes (approximately three and one-third pounds).

Intracranial Irritation in the Newborn.

W. S. CRAIG (*Archives of Disease in Childhood*, December, 1950) describes varying degrees of intracranial irritation of the newborn in 593 cases. In a large number of these the evidence of intracranial irritation was slight. In 168 cases it was considerable or great, but in the remaining 425 it was slight, consisting of nothing more than such signs as unnatural alertness, disinclination to sleep and "jumpiness" when approached, or fragility with a feeble whining cry and disinclination to suck. The author was able to follow 472 of these children for one year, 361 for three years and 306 for five years. In only 52 of them did he find physical or mental sequelæ of the neo-natal cerebral irritation, and a considerable pro-

portion of the sequelæ arose in children whose original symptoms had not been severe. Physical defect alone occurred in 19 cases, mental defect alone in nine, both physical and mental defect in 20, and convulsions in 18; four children of the last-mentioned group had no other physical or mental damage. The author includes a summary of the ante-natal and natal history and the salient features of the neo-natal illness of each child in whom evidence of permanent brain damage was found.

The Risk of Poliomyelitis after Tonsillectomy.

G. W. ANDERSON, G. ANDERSON, A. E. SHAAR and F. SANDLER (*Annals of Otology, Rhinology and Laryngology*, September, 1950) record a series of 21 cases of poliomyelitis occurring within a month after tonsil removal during the period of an epidemic in Minnesota, United States of America, in 1946. Detailed epidemiological histories were obtained in 2709 cases. In 19 of these the patient had had tonsillectomy or adenoidectomy during the previous month, and in 12 such cases the disease was bulbar (63·2%). During the entire outbreak 20% of all the patients and 11% of those under the age of twelve years had bulbar infection. All except two of the post-tonsillectomy patients were between three and seven years of age—that is, 17 patients. Sixteen of these patients had their operations performed between specified dates. During this same period 508 children of the same age group developed poliomyelitis in the State, 491 of whom had not had a recent tonsillectomy or adenoidectomy. It is estimated that 2686 tonsil and adenoid operations were performed on children of the three to seven years age group between the same dates. Of this group 16 developed poliomyelitis, or a ratio of one to 168 operations (0·60%). It is estimated from statistical data that the number of children of the three to seven years age group in the State, excluding those recently operated upon, was between 220,000 and 260,000. Of those, 491 developed poliomyelitis, making an attack rate of 0·19% to 0·22%. The attack rate for the group whose tonsils were removed during the preceding month was thus three times greater than that among those not undergoing such operations. The bulbar attack rate in the operated group was one to 224 (0·45%), and in the total population of the same age group it was one to 2508 (0·04%), a rate only one-eleventh of that in the tonsillectomized group. While the number of cases is small, it is considered that the difference in the figures is statistically significant.

Glutamic Acid and Mental Function.

HAROLD G. LOEB and READ D. TUDDENHAM (*Pediatrics*, July, 1950) have attempted to assess whether or not glutamic acid has any beneficial effect in improving the mental function of retarded adolescents. The subjects were 33 institution patients, divided into two well-matched groups. In one group each patient was given 24 grammes of monosodium glutamate by mouth each day for seventeen weeks. Patients in the control group were given a placebo in the same way and at the same time. Before and after the experimental period the following psychological tests were carried out: the Stanford-Binet, the Cornell-Coxe ability scale, the Porteus maze, the Thurstone and Thurstone primary mental abilities and the Rorschach. No significant difference between control and experimental subjects could be shown, and it was concluded that glutamic acid produced no benefit in these feeble-minded patients.

ORTHOPÆDICS.

Joint Débridement for Osteoarthritis of the Knee.

BRUNO ISSERLIN (*The Journal of Bone and Joint Surgery*, August, 1950) states that "joint debridement" is a term introduced by Magnuson (1941) to describe an operation on the knee in which all the accessible synovial membrane, osteophytes, diseased cartilage and abnormal soft tissues are removed in an effort to relieve the symptoms of osteoarthritis. He records the results of 35 operations performed on 32 patients during the last eight years; the series includes all those patients whom it was possible to trace and examine twelve months or more after their operation. He states that experience has shown it to be wise to reserve operation for cases of persistent pain with swelling and moderate instability of the knee, in patients who have not obtained relief from conservative measures. The joint should not be too grossly disorganized, for the aim is to relieve pain and yet to preserve useful movement. The patients must be those who are capable of cooperating in the after-treatment, which is quite painful at the time just after operation. The only fixation used after operation is a compression bandage. Quadriceps exercises are begun as soon as possible and active movements after a few days. Weight can usually be taken on the leg after three weeks. The recovery of flexion may be aided by cautious manipulation after five or six weeks, but only if the range at that time is less than 50°. The range of movement may be expected to improve for twelve months. The author states that the operation was considered a success if the patient's pain was abolished or greatly relieved, if the knee retained or regained nearly full extension and movement through a right angle, and if the joint became stable enough for normal activity. These conditions were fulfilled, after 23 of the 35 operations, in 22 patients.

Oxidized Cellulose and Cortisone in the Prevention of Excess Bone and Fibrous-Tissue Formation.

FRANK E. STINCHFIELD (*The Journal of Bone and Joint Surgery*, October, 1950) considered that oxidized cellulose (absorbable gauze) might reduce excess bone formation following joint surgery. In experimental work with dogs it was interposed between fracture fragments, and complete non-union developed. It was used clinically in 22 joint arthroplasties and in 20 cases in which the prime purpose was to limit recurrence of bone production, as in the removal of exostoses, in *myositis ossificans*, and in resection of radial heads. In the arthroplasty series the patients seemed to be comfortable after operation, and the degree of motion was greater than that achieved without the addition of oxidized cellulose. The author discusses how the gauze in the immediate proximity of the bleeding bone interferes with the normal process of bone production. He states that although bone formation could be inhibited by the use of oxidized cellulose, fibrous-tissue formation progressed normally or at an accelerated rate. Therefore, some means was needed of retarding the growth of fibrous tissue in order to overcome another major complication in traumatized joints and in joint arthroplasties. It has been shown that wound healing is inhibited by the administration of cortisone, and it is suggested that the catabolic effect of hyperadrenalism on protein metabolism may account for the decreased activity of mesenchymal tissues. The cortisone hinders degeneration of collagen and thus prevents fibroplastic proliferation. In operations on the right hips of 12 dogs, cortisone was injected into the hip and in some cases was also administered systemically. The result was less thickening of the capsule, more free motion, less crepitation and no inflammatory reaction. The author suggests from this that cortisone has much to recommend it when inhibition of fibrous-tissue formation is desired. Its chief value is in its direct effect locally at the site of surgery, where theoretically it retards the enzyme, or allergic manifestation, producing fibrous and connective-tissue formation. Local injection of cortisone, together with systemic intramuscular administration, appears to offer the greatest help in preventing fibrous-tissue formation. With these facts in mind, clinical application has been initiated. Sufficient time has not elapsed to evaluate the results in humans. However, so far they are encouraging and may contribute toward a lowering of the percentage of complications related to fibrous-tissue and bone formation following operative orthopædic procedures.

Marie Strümpell Arthritis.

LENOX D. BAKER, R. W. CONRAD, ROBERT J. REEVES and W. A. HOYT (*The Journal of Bone and Joint Surgery*, October, 1951) have found that in a series of 100 patients with Marie-Strümpell arthritis, treated by radiotherapy *plus* corrective measures, the results, based on relief of pain, range of motion and radiographic changes, indicate that the therapy can be expected to give approximately the same relief from pain during any stage of the disease. Increase in range of motion can be expected in a fair percentage of the mild and moderately advanced cases. Although there is relief from pain, a decrease in range of motion and further ossification may occur. In the mild or moderately advanced cases, the process can be arrested and in some instances cleared by the radiotherapy. Of the 47 patients in the mild and moderately advanced groups, 15 showed radiographic clearing of the bone changes; 24 showed no change or advance in the disease; only seven showed advance with additional ossification. Comparison with the advanced group of 32 patients shows that radiographic improvement can be expected in the earlier cases more frequently than in the advanced cases, in which the changes are no longer reversible.

Special Article.

THE TERRITORY OF PAPUA AND NEW GUINEA EXPANDS ITS HEALTH PROGRAMME.

STATEMENTS have been made since 1945 by at least two Ministers of State for External Territories that their Governments are determined to bring better health to the peoples of Papua and New Guinea, through an expanded health service.

As recently as December, 1950, the Honourable the Minister for External Territories, Mr. P. C. Spender, K.C., M.P., announced that the Commonwealth Government was to commence with an extensive programme for the construction of hospitals in the Territory of Papua and New Guinea. The Minister for External Territories referred to his earlier announcement that the Government had approved of a programme for the construction of hospitals throughout the Territory at a cost of about £7,000,000. Mr. Spender said that, as part of this programme, he had now approved of the plans for the base hospitals that were to be built at Port Moresby and Lae at a total estimated cost of about £1,750,000. It was intended that the work would be commenced as soon as possible.

Confirming his earlier announcement in the matter, Mr. Spender said that, with a view to preventing this major construction work from adding to the inflationary factors already affecting the Australian economy, it was the Government's intention that the work would be carried out in such a way as to avoid the imposition of any drain on Australian resources of labour and material.

The present expenditure by the Administration is more than ten times greater than any pre-war figure in order to bring about this programme of an expanding health service.

More than 100,000 patients are being admitted as in-patients annually.

Many readers who fought through the New Guinea campaign will be aware of the vast problems that exist to bring better sanitation to the primitive people of this Territory. A delightful article in THE MEDICAL JOURNAL OF AUSTRALIA of September 30, 1944, "Papuan Interlude", by C. H. W. Lawes and B. T. Keon-Cohen, which is well worth re-reading, portrays many of these problems.

The Governments of the Commonwealth of Australia have stressed the necessity to develop the Territory economically —a Territory which is capable of providing Australia with all her requirements of tropical products, which must now be imported from doubtful sources. This vast Territory, with an area of some 180,000 square miles and a population of 1,500,000, is a rugged country from the wet tropic climate of the coastal plains, with their swamps and many river systems, through the rain forests to the cool and fertile central highlands, which have been described as being another Kenya on a smaller scale.

Many people still remain to be brought under the influence of the Administration. A five-year programme has been established to bring government control to the whole Territory. With the introduction of law and order, so must the development of health bring a plan for disease-prevention, to stop the entry, particularly, of those introduced diseases that in the past have decimated much of the population. As an example of a wet tropical country the Territory has a limited tropical disease pattern. The pestilential diseases smallpox, cholera and plague, so close to our borders, are not present, and whilst there is some history of smallpox having swept the country before the coming of the European, this disease has not been seen during the rule by the United Kingdom, Australia or Germany, or during the war. During the current year 100,000 calf lymph vaccinations have been carried out.

The most important disease is malaria. Those who served as hygienists and malaria control officers during the war will realize the magnitude of the problem in peace time. For the proper economic development of the Territory malaria must be controlled, and to this end the Administration is establishing research to bring this control about, within its financial resources. For success, education must cause the people to desire it—their cooperation is essential. In the highlands of New Guinea *Cinchona* spp. culture was established before the war; then with the cutting off of 90% of the world's supply of cinchona, great impetus was given to the expansion of this culture. It must now be further expanded, and it is hoped that this extension will enable the Territory to produce the whole of its requirements of "Totaquine" and that current research will allow the establishment of village industries providing a suitable suppressive. Education will be used to stimulate village mosquito control. At present detailed research is being undertaken in the central highlands, which encourages the people to adopt a drainage system to eradicate *Anopheles farauti* from the Pit Pit swamps, and which will, in turn, make literally thousands of acres of rich fertile land available to crop culture.

Probably the next disease of significance is the disease brought in within the last century—tuberculosis. This has proven a veritable white plague in those areas of longest European habitation. An article by E. A. North and D. Jamieson in THE MEDICAL JOURNAL OF AUSTRALIA of November 25, 1950, drew significant attention to this. Physical disabilities prevent the treatment and segregation of most of the sufferers. Thus a policy was adopted of mass immunization with *Bacillus Calmette-Guérin* (B.C.G.) This programme is proceeding at present at the rate of 300,000 vaccinations *per annum*. It was commenced in the non-immune central highlands, recently explored for the first time, where were found some hundreds of thousands of people who were *Mycobacterium tuberculosis* sterile. This phase in the highlands is now nearly completed, and the vaccination team has been transferred to the hyperendemic coastal areas. The use of B.C.G. in the Territory with such a limited transport system is not without its drama, owing to the short life of the vaccine. The Commonwealth Serum Laboratories place the vaccine in their own refrigerator at an airlines office at Essendon Airport, Melbourne, on Friday afternoon. This is flown on the Saturday morning to Sydney, where it is transferred to a "Skymaster" which brings it to the Territory, arriving at Port Moresby at daylight on Sunday. From here it is transferred to Lae, Rabaul or Madang on the same day on an internal airline route. From these major centres charter aircraft fly it to its eventual destination and if necessary air-drop it to the parties in the field by no later than the Tuesday following its day of dispatch from Melbourne.

Research into treatment with streptomycin and PAS, if one remembers our limited ability to provide hospital treatment, at this stage has been most encouraging—that is, for our type of tuberculosis and our conditions. A team from the South Pacific Commission undertook research into the field diagnosis of tuberculosis in this Territory and has given much valuable information. Our own research into the most efficacious method of using B.C.G. amongst the primitive people has brought to light many facts which are now being collated for publication. It is proposed to establish in the Trobriand Islands, but on a larger scale, a replica of Aronson's classic work.

The high infant mortality rate, which reaches 500 in some areas, is receiving our attention. A branch of the Department is established to bring increasing infant and maternal welfare, and as accommodation and staff become available this work is being extended into the more primitive areas. Under the direction of Dr. F. W. Clements, now Director of Nutrition of the World Health Organization at Geneva, a nutrition survey was undertaken in the Territory in 1947. The report of the survey recently printed has caused the formation, with the widest representation, of a nutrition council in the Territory.

The antibiotic drugs, including terramycin, are being used to establish the most economic method in the treatment of such conditions as yaws, *granuloma venereum*, tropical ulcers, and those other conditions which in the past have required expensive lengthy periods in hospital. Medical surveys have been undertaken amongst the peoples of the more isolated island groups with a view to their medical rehabilitation through community development. Particular attention was given to the western islands, where depopulation caused R. W. Cilento's monographs, "The Causes of the Depopulation of the Western Islands of the Territory of New Guinea".

The increased staffing of the Department has brought to notice a cancer pattern not dissimilar from that seen amongst our own communities. It has been necessary to transfer patients to the Brisbane General Hospital for radium and deep X-ray therapy, but through the kind offices of the Commonwealth X-ray and Radium Laboratories, radium is now available within the Territory, and deep, medium and superficial X-ray therapy apparatus is on order from England.

The maximum fight against disease amongst the native population must take place in the village. To this end selected natives are being trained to give first aid in the common disease pattern and to bring improved village sani-

tation, particularly mosquito control and the disposal of wastes. This part of the programme requires great supervision, necessitating constant patrolling by our European officers, who must travel by foot, by canoe, by launch or by aircraft. A basic principle of the Department's policy is to use more and more trained native people in the Department. To this end the establishment has been approved of a central medical school along the lines of the famous Suva school. It is necessary that initial teaching will start on a lower plane than now occurs at Suva, because of the lag in education in the people of Papua and New Guinea. This lag has made their success at Suva a difficulty, though the first assistant medical practitioner should graduate from Suva at the end of this year. He is one of six who were specially selected and sent to Suva in January, 1947. It is essential that the native women accept the responsibility of nursing. The central medical school will assist to arrange this. The control of this extension in training will be the responsibility of an assistant director of the Department. It is hoped eventually to assist in the staffing of our laboratories and X-ray departments with trained native people. A commencement has been made to train natives to give dental first aid in the villages.

There is much development and survey taking place in the Territory for its future benefit. This has caused the outstripping of accommodation. This territory, so mutilated by the war, has actually had to build from the beginning again, but this has not prevented such enterprises as the wide search for oil, the planting of new crops, the rehabilitation and harvesting of plantations, an extension of commercial and trading activities and the formation of native cooperatives. All this has brought a continually increasing European population to dwell semi-permanently in the Territory. It has become the accepted policy that all necessary medical aid should be given to these people, rather than that their transfer to Australia should be required except for the most special treatments. This requires an increased staff of specialist and medical officers, but for some time to come it will require certain attributes in these officers, because it is a hard country, devoid of many amenities today. Its medical officers must be prepared to patrol widely and to put up with certain inconvenience in accommodation, and they must have a zeal and a patience to make the service a success.

The immediate problems in the Territory require a staff of 316 officers, and proposals have been made to increase this eventually to 600. A major part of this latter increase, it is hoped, will be taken by educated native people entering a fourth division of the public service. As well as 316 Europeans, over 2000 natives are now employed as hospital orderlies and as medical assistants in their villages, or are in training for these duties.

Whilst disease prevention cannot be properly divorced from disease treatment, an increased emphasis is made to all officers on the supreme importance of prevention. To this end it is required that medical officers undertake their course for the diploma of tropical medicine and hygiene at the expense of the Administration before promotion.[2] As conditions allow, it is hoped to establish special refresher courses to meet the special problems of the Territory. An extensive lending library of text-books and journals is maintained in order that all officers may continue their studies.

It must be repeated that service conditions will not be easy for some time to come. But the Administration is determined that the policy of the Government of the Commonwealth of Australia will be made to succeed and that as quickly as possible.

J. T. GUNTHER, M.B., D.T.M. and H.,
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Medical Societies.

MELBOURNE PÆDIATRIC SOCIETY.

A MEETING of the Melbourne Pædiatric Society was held on September 13, 1950, at the Children's Hospital, Carlton, Melbourne.

Tuberculous Meningitis.

DR. STANLEY WILLIAMS and DR. B. W. NEAL presented a paper entitled "Meningeal Tuberculosis in Children: A Review of Forty Patients" (see page 676).

DR. A. W. WILLIAMS read a paper entitled "Pathology of Tuberculous Meningitis, with Particular Reference to Modification in Pathology following Treatment with Streptomycin" (see page 680).

DR. REGINALD WEBSTER said that he would discuss the manner in which tubercle bacilli were deposited in the meninges in numbers sufficient to evoke the exudative inflammatory reaction characteristic of tuberculous meningitis. For many years the pathogenesis of tuberculous meningitis seemed to present no problem, it being generally agreed that it was the result of direct meningeal infection by way of the blood-stream, and appeared as a phase of miliary tuberculosis. That belief was based on the frequent coincidence of tuberculous meningitis and miliary tuberculosis, especially in infants; but it had been challenged, and apparently successfully, by Rich and McCordock (1933), who maintained that tuberculous meningitis arose independently of miliary tuberculosis and was to be attributed to infection of the meninges by the discharge of the contents of a contiguous caseous focus into the subarachnoid space. The views advanced by Rich and McCordock gained general, though not unqualified, support from an investigation of the question by MacGregor and Green (1937), and in 1944 James McMurray published in the *Archives of Disease in Childhood* observations gained from a study of the brains and general autopsy features of 11 children who had died of tuberculous meningitis. From his findings McMurray concluded that tuberculous meningitis commonly ensued on the extension into the subarachnoid space of a focus in adjacent tissues, such as the meninges, the cerebral cortex or the cranial bones, the *tegmen tympani* and mastoid process particularly. A review of any adequate series of carefully performed autopsies would show (i) that there might be no meningitis in the presence of miliary tuberculosis of even maximum intensity, and conversely (ii) that meningitis occurred not infrequently in the absence of miliary tuberculosis.

Dr. Webster went on to say that in 1947 he had examined the clinical records of 95 children from whom he had recovered *Mycobacterium tuberculosis* by bacteriological investigation of the gastric content. Among those 95 children of the pre-streptomycin era there were 20 who had died from tuberculous meningitis. The usual finding at autopsy was that the pulmonary lesion of the primary complex, more often than not overshadowed by the complementary tuberculous changes in the tracheo-bronchial lymph nodes, was the precursor of a variable degree of miliary sowing in the lungs and other viscera. In three children of that group, however, tuberculous meningitis and the primary complex to which it was indirectly referable were unaccompanied by any macroscopically detectable miliary sowing in the thoracic or abdominal viscera. In a particular instance provided by a little girl, aged three and a half years, who had died of tuberculous meningitis and whose gastric content yielded a culture of *Mycobacterium tuberculosis*, the only manifestations of tuberculous disease other than the meningitis to be discovered in the body by gross inspection were an apparently soundly healed Ghon focus and dry calcareo-caseous changes in the tracheo-bronchial lymph nodes. Yet that child was eliminating tubercle bacilli, intercepted in the laboratory in the gastric content, and the observation not only provided an example of the occurrence of tuberculous meningitis apart from miliary tuberculosis, but indicated also that the determination of healing in a primary complex might be a matter of very great difficulty. Rich and McCordock had found that the injection of massive doses of virulent tubercle bacilli into the blood-stream of experimental animals regularly caused generalized miliary tuberculosis but did not induce simultaneous acute exudative meningitis. The immediate result, as it affected the meninges, of experimental infection by way of the blood-stream, was the production of sparsely distributed discrete tubercles; the exudative inflammatory reaction of tuberculous meningitis, when it did occur, did not supervene for the several weeks required for the caseation, softening and discharge of the contents of one or more of the foci into the subarachnoid space. On the other hand, when tubercle bacilli were introduced directly into the subarachnoid space by way of the optic foramen, the diffuse inflammatory reaction characteristic of tuberculous meningitis followed immediately.

Dr. Webster then asked if tuberculous meningitis was not to be regarded as a phase of miliary tuberculosis, how the undoubtedly frequent coincidence of miliary tuberculosis and tuberculous meningitis in children, and in infants especially, was to be explained. Infants and very young children had little opportunity to acquire resistance to tuberculous infec-

tion, and at autopsies in which tuberculous meningitis and miliary tuberculosis were found to coexist, it was generally observed that the primary pulmonary or abdominal lesion, or the associated lymph node component, was progressive and extensive. It was not surprising, therefore, that under such conditions there was greater opportunity for the development in the brain and meninges of caseous foci prone to undergo rapid softening and to discharge bacilli into the subarachnoid space. Dr. Webster said that in the discussions which the point had evoked among interested workers, it had even been suggested that tuberculous meningitis might precede and give rise to miliary tuberculosis. Although that proposed reversal of a conception which had prevailed for generations seemed at first an improbable if not far-fetched suggestion, it was perhaps not so unreasonable. Until the advent of streptomycin therapy determined some negative findings, it had been his experience that tubercle bacilli were susceptible of cultivation from the cerebro-spinal fluid of every child affected with tuberculous meningitis; the inference was that tubercle bacilli were always free in the cerebro-spinal fluid, and in the normal course of its circulation the spinal fluid might be expected to convey the microorganisms to the venous system. The caseous foci, which, as had been cogently advocated, stood *in loco parentis* to tuberculous meningitis, when situated in the brain and meninges might be difficult of detection. Before it could be concluded that there was no such focus from which tubercle bacilli had reached the subarachnoid space, it was necessary to cut the well-hardened brain in serial slices not more than three millimetres in thickness, and the finding of the foci in question was facilitated by the use of transillumination. Tuberculous foci in the juxta-meningeal tissues were initially of hæmatogenous origin, and the bacilli responsible for them effected their lodgement in the course of the hæmic broadcast which frequently attended primary infection. In the circulatory dispersion many bacilli were distributed in tissues relatively insusceptible to tuberculous infection, but others might attain a favourable nidus, and eventually initiate and maintain a metastatic caseating lesion. Such a focus, if appropriately situated, might precipitate tuberculous meningitis by the discharge of its contents into the subarachnoid space. Tuberculous meningitis thus took its place with other post-primary phenomena, such as renal tuberculosis, tuberculous pleurisy, and tuberculosis of bones and joints.

DR. H. BOYD GRAHAM pointed out some of the difficulties in the diagnosis of meningitis, especially in early lesions, when there was no supporting evidence of demonstrable tuberculous lesions elsewhere in the body, and when culture of the cerebro-spinal fluid did not yield a growth of tubercle bacilli. He referred to one such patient, from whom the first culture of the cerebro-spinal fluid failed to grow tubercle bacilli, and after six weeks' therapy with streptomycin treatment was discontinued, as it was considered that the boy's original symptoms might not after all have been due to tuberculous meningitis. However, relapse of the meningitis occurred shortly afterwards, and the second culture of the cerebro-spinal fluid yielded a growth of tubercle bacilli. Dr. Boyd Graham also stated that in treating those patients he had found that intraventricular drainage and therapy by streptomycin were of value whenever there was evidence of obstruction to the circulation of cerebro-spinal fluid. He had difficulty in interpreting the significance of a raised cerebro-spinal fluid pressure as an isolated finding in patients who seemed to be progressing satisfactorily under treatment. He wondered whether a raised cerebro-spinal pressure was the early sign of obstruction to the circulating fluid.

DR. V. L. COLLINS also referred to some of the difficulties encountered in establishing an early diagnosis, and he also stressed the value of seeking evidence of tuberculous lesions elsewhere. In one case the presence of chorioidal tubercles had established the diagnosis of tuberculous meningitis in a patient who seemed to have non-specific encephalitis. X-ray examination of the chest was also of value in some cases.

Dr. Collins also quoted a clinical history illustrating the difficulty of giving a prognosis. Even when a patient was steadily deteriorating under treatment and the outlook seemed hopeless, an unexpected change might occur and the patient do well.

DR. R. S. HOOPER said that the neurosurgeon might be able to assist in the treatment. He found that if spinal block developed, then ventriculography with intraventricular therapy might be helpful. He had experienced most difficulty in determining when to carry out ventriculography, but considered that early hydrocephalus and probably a raised cerebro-spinal fluid pressure were definite indications. Intraventricular streptomycin therapy had been of definite value to those patients who had become terrified from repeated lumbar punctures, and to those who had developed skin sepsis in the region of the lumbar punctures. Streptomycin could be quickly and painlessly introduced into the ventricles after burr holes had been made in the skull.

DR. ROBERT SOUTHBY, like other speakers, stressed the importance of early diagnosis in the cases under discussion, as all workers agreed that those patients whose condition had been diagnosed early and for whom treatment had been promptly instituted had by far the greater percentage of recoveries. There was sound clinical and pathological evidence to support that view.

THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA.

A MEETING of the Medical Sciences Club of South Australia was held in the Anatomy Lecture Theatre, Frome Road, Adelaide, on April 6, 1951.

Cell Membranes.

DR. S. G. TOMLIN read a paper on cell membranes. After some introductory remarks about the relations between physics and biology in the study of living matter, particularly with regard to morphology and molecular structure, he presented a brief survey of the commonly occurring types of cell membranes. Of these, he said, most attention was devoted to the plasma membrane and the nuclear membrane. The former had been extensively studied, especially with regard to its permeability properties, the erythrocyte membrane being a favourite object. Such studies, together with observation of the tension of the membrane, had led to the conclusion that it consisted of a lipoid layer lying between two protein sheets. Analysis of ghosts of erythrocytes had led Winkler and Bungenberg-de-Jong to conclude that the membranes consisted of an inner protein layer supporting an outer layer of radially arranged phosphatides stabilized by a smaller number of cholesterol molecules, the outer lipoid layer having a porous structure. The evidence bearing on this structure problem was considered and found to be, on the whole, in favour of the suggested structure, except that birefringence studies suggested a tangential orientation of the protein molecules. Dr. Tomlin said that the electron microscope observations of Wolpers appeared to suggest a protein network with lipoids embedded in the meshes, but that might be open to question. Whatever the general pattern of the membrane structure, there was no doubt that it was not uniform over the whole surface.

The results of an electron microscope study of the nuclear membrane of amphibian oocytes were presented, from which it was concluded that the membrane consisted of an inner, apparently continuous, protein sheet 200 Angström units thick supporting a lipoid layer 300 Angström units thick having a regular porous structure with pores of about 400 Angström units in diameter placed 800 Angström units apart. The need for more detailed studies of these structures with use of the method of electron diffraction was discussed, particularly with regard to problems of protein structure and the relation between fibrous and globular proteins. In this connexion the conversion of vitelline into fertilization membrane in echinoderm eggs was commented on as a nice problem of protein structure.

Finally the process of diffusion was briefly considered and attention drawn to the fact that a film formed on a liquid was not a static structure, but that there was an exchange of molecules between film and liquid and that that might play an important part in the process of diffusion through the membrane.

Special Correspondence.

NEW ZEALAND LETTER.

FROM OUR SPECIAL CORRESPONDENT.

GERALD SPENCE SMYTH, M.D. (Dublin), F.R.C.P.I., F.R.C.O.G., has been appointed to the Post-Graduate Chair of Obstetrics and Gynæcology, Auckland University College, the first medical post-graduate chair in New Zealand. Dr. Smyth is forty-seven years of age, qualified from Trinity College, Dublin, and has practised in Johannesburg, South Africa,

where he has been senior gynæcological surgeon and obstetrician to the Johannesburg Hospital and Queen Victoria Hospital, and senior lecturer on obstetrics and gynæcology at the University of Witwatersrand. He was formerly Assistant Master of the Rotunda under Dr. Bethel Solomons.

Dr. Smyth was a commissioned officer in the South African Medical Corps (Union Defence Forces) before the war and was called up for service in 1940. He later commanded the Twenty-third Field Ambulance, South African Medical Corps. Since the war he has had teaching experience in the post-graduate field.

The plans are taking shape for the new 200-bed teaching hospital for women (where Professor Smyth will be established), to be located on a site adjacent to the Green Lane Hospital, Auckland. Realization of objects long since aimed at therefore seems a little nearer.

Correspondence.

OBSERVATIONS ON POLIOMYELITIS OF EPIDEMIOLOGICAL INTEREST.

SIR: I have recently met with a series of cases of poliomyelitis which I think is of some epidemiological interest. Three family groups have been involved, and these I shall distinguish by their respective surname initials, D., W. and L. All live on grazing properties near Lyndhurst, a small town on the South-Western Highway between Blaney and Cowra, in New South Wales. D. and W. are cousins, and live thirteen miles and seven miles from Lyndhurst respectively, but in opposite directions, and W. and L. are neighbours. There was no direct contact between D. and W. between December 17 and January 16, but W. and L. were frequently in contact over this period.

D. is made up of the parents and their three children, aged seventeen, fourteen and twelve years, in W. are the parents and five children ranging from eighteen to eight years, and in L. are the parents and two children, aged nineteen and fourteen years. Those of school age in W. and L. attend school in Cowra, and in the case of D., who are more isolated, one child is taught by correspondence and the other boards out and attends a small country school near Lyndhurst. All the school children were on holidays, but together with other members of their families were accustomed to visit Lyndhurst or Cowra at least once each week.

Both W. and D. received a number of visitors during the period under review, but only one group were common to both. This was a family R., who went first to W. on December 24 and stayed in the house until December 27, when they went on to D. and remained until January 3. They then returned to W., and after a week there left the district. This family had forgathered from widely separated points, the father and a youth of seventeen having come from Menindie, another child from an institution in Sydney, and the mother and an infant from Scone. Accommodation in both houses was considerably overtaxed by this influx, and a good deal of crowding indoors, and particularly of sleeping space, was unavoidable.

B.D., a girl of twelve, became ill on January 10 and was admitted to hospital on January 12 with a diagnosis of poliomyelitis. She came over to Bathurst on February 7, and was found still to have right facial weakness and partial involvement of most of her leg muscles. She had been swimming on the day before her admission to hospital, but had done nothing strenuous, and it is interesting to note that she without prompting said that she felt less tired and heavy while in the water. P.D., a youth of seventeen, was not well on January 12, but played cricket two days later. He felt so sick, however, that he left the field and on January 16 was sent to hospital as a case of suspected poliomyelitis. On arrival in Bathurst three days later he was extensively paralysed, with involvement of all four limbs, of the back and abdomen, and of the intercostals and diaphragm severe enough to need three days of respirator assistance. S.D., a boy of fourteen, was diagnosed on clinical grounds on January 18, after an illness of several days. He made a rapid recovery, and when examined in Bathurst on February 7 nothing was found but a slight left facial weakness, but his description of the acute stage leaves little doubt as to the nature of his illness.

R.W., a boy of sixteen, played cricket on January 14, felt sick next day, and was admitted to Cowra District Hospital on January 16. His paralysis followed a bulbo-spinal distribution, and he had a stormy passage for several days after arriving in Bathurst on January 19, and narrowly avoided a tracheotomy. He was left with a right facial palsy and partial paralysis of both legs. J.W., a boy of eighteen, felt sick on January 19 and was examined at Bathurst on the following day, then kept under observation until January 22, when a lumbar puncture confirmed the provisional diagnosis of poliomyelitis. During this period he was hyperpyrexial and alternated between stupor and excitement, but at no stage did he have much stiffness of neck or back, nor was there any sign of paralysis. He made a rapid recovery which seems to be complete.

Two girls belonging to family W., aged ten and eight, had short illnesses between January 15 and 20, but were not examined at that time. Their symptoms were in retrospect extremely suggestive, though when examined on January 22 they seemed to have recovered without trace of sequelæ. Finally, D.L., aged nineteen, was brought to Bathurst on January 26, having become ill on the previous day, and was found to have diagnostic findings in his cerebro-spinal fluid. His progress was interesting, in that his paralysis progressed during the third and fourth days of his illness and then, having involved both legs to a gross degree, together with both triceps, deltoids and diaphragm, appeared to halt, and his temperature fell. Two days later there was a rapid deterioration with a second onset of fever, and respirations so rapid and shallow that the respiratory centre was thought to be affected. To our surprise he did very well in the respirator and was able to leave it in two days, but was soon found to have a massive collapse of the right lung, which had probably been responsible for his relapse. He was temporarily helped by bronchoscopic drainage, but suddenly collapsed and died in the sixth week of his illness.

There seems little doubt that this striking and explosive outbreak well shows the possible effect of the introduction of infection into a comparatively isolated community, presumably comprised largely of non-immunes, under circumstances which seem to have favoured its spread. It was found that between January 20 and 27 two members of the visiting family R. had had short illnesses, one having had stomach pains, vomiting, and a "bad head", and the other a week later reporting a sore throat and a cold. Whether these sicknesses are of significance is not known, nor can any conclusions be drawn from the incidence of a mysterious though short-lived illness in a baby of this family beginning about the end of January, but it does seem certain that among the visitors common to both families was a very infective carrier. It is interesting to see how a virus transmitted to so many almost concurrently and in a common environment can yet be influenced by varying circumstances sufficiently to produce clinical findings as diverse as these, though one may at the same time conjecture that the high percentage of seventh nerve lesions may be in some way peculiar to the virus concerned. There have been a number of other cases reported from Cowra, mainly from the Migrant Centre, but the unities of space and time are in this outbreak so strikingly observed that a common source seems obvious.

May I express my thanks to Dr. Richard Hodgkinson for his supervision of the orthopædic care of these patients, and for his stimulating interest in the whole outbreak, to Dr. E. C. M. Wallace, medical officer of health in charge of the Mitchell Health District, and to my partners, Dr. Brooke Moore and Dr. P. W. Van Gelderen, for their help, and to the nursing and physiotherapy staff who have coped nobly with this sudden addition to the number of poliomyelitis victims which were already taxing the limited facilities available.

Yours, etc.,

142 William Street, Bathurst,
Undated.

R. G. B. CAMERON.

VISIT OF PROFESSOR B. W. WINDEYER AND DR. M. H. JUPE.

SIR: With reference to a letter from Dr. A. T. Nisbet in today's issue of your journal, I feel that the official view of the College of Radiologists (Aust. and N.Z.) should be stated.

The visit of Professor B. W. Windeyer and Dr. M. H. Jupe to this country (primarily to conduct examinations for the Fellowship of Radiologists of London) has been made pos-

sible by the generous help of the Faculty, and this body is defraying part of their expenses. Further a very generous donation for this purpose from the Thomas Baker and Eleanor Shaw Benefactions is gratefully acknowledged.

It was thought fitting that in addition to special lectures to members of the College and other specialists, lectures of general interest to the medical profession by these distinguished visitors might be arranged.

The Australian Post-Graduate Federation was therefore approached, and my Council wishes to record its appreciation of the Federation's expert help, and in addition a generous donation which it has given towards expenses.

The lectures which have been arranged are open to all medical people without fee.

Yours, etc.,

HAROLD J. HAM,
Honorary Secretary, College of Radiologists (Aust. and N.Z.).

135 Macquarie Street,
Sydney,
April 21, 1951.

REPORT OF TWO CASES OF HERPES ZOSTER TREATED WITH "CHLOROMYCETIN".

SIR: I am writing this letter in reply to Dr. Ian O. Stahle's letter in the April 7 number of the journal. Dr. Stahle does not think "pain, irritation, duration and extent of the eruption" has any relation to the severity of a *herpes zoster* case. That might be so. Age definitely has always made a difference, and *herpes zoster* in a patient over fifty years is always serious and very often crippling for the rest of the life (post-herpetic pain).

I have treated a female patient of mine, Miss L.B., fifty-one years of age, who had a typical *herpes zoster* eruption on the forehead and complained of a fair amount of neuralgia. I gave the patient twelve capsules of "Chloromycetin" 0·25 gramme over four days. Improvement was seen within twenty-four hours, and new vesicles dried up in two to three days. On the seventh day only a group of dry scales was left, and the pain had completely gone. That fact I consider the most important feature. If we have in "Chloromycetin" a drug which can prevent the post-herpetic pains in the elderly patient, this drug should be widely and generally used. Mr. N. F. Babbage has published two cases in the March 3 number of your journal and was criticized. Here is another case, and I recommend the more liberal use of "Chloromycetin" in *herpes zoster* to find out if the improvement we saw was *post hoc* or *propter hoc*.

Yours, etc.,

W. WINTERTON, M.D., L.M.S.S.A.

Pingelly,
Western Australia,
April 17, 1951.

GENERAL PRACTICE TODAY IN URBAN AREAS.

SIR: I refer to the letter of the Minister of Repatriation in your journal of April 7, 1951, in which he discusses some aspects of my article published in the "Commonwealth Jubilee Number". In reply I wish to state that I have nothing to retract. My article was factual, and the facts as stated are common knowledge to every member of the profession. Nothing contained in the Minister's letter has altered the position.

Yours, etc.,

LEIGH COOK.

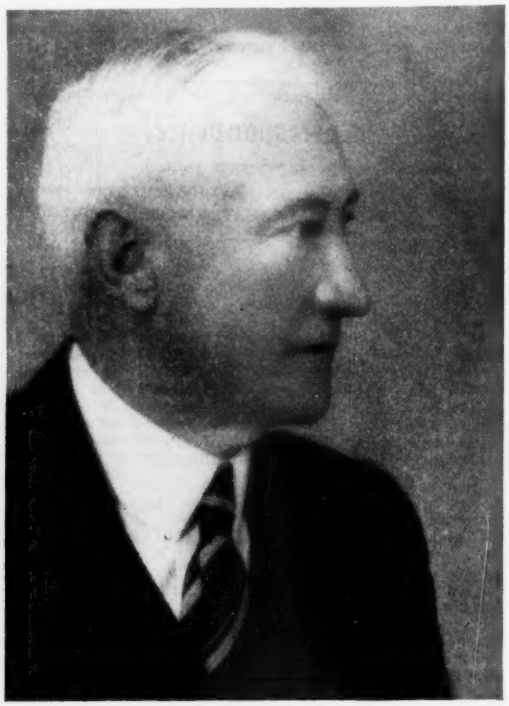
128 Stirling Highway,
Claremont, Western Australia.
April 26, 1951.

Obituary.

ARTHUR MURRAY CUDMORE.

WE are indebted to Dr. Bronte Smeaton for the following appreciation of the late Sir Arthur Murray Cudmore.

Arthur Murray Cudmore was born in 1870 at Paringa sheep station on the Murray river and retained through his life a love of the country and its pursuits and interests. He matriculated from Saint Peter's College, Adelaide, and graduated M.B., M.S. (Adelaide) in 1894. Some years later, after post-graduate work at the London Hospital, he became a Fellow of the Royal College of Surgeons. During his stay in London he was house surgeon at Saint Mark's Hospital in the City Road and from that base attended the work of many general and special surgical clinics. Soon after his return to Australia he was appointed honorary assistant surgeon to the Adelaide Hospital and in 1905 honorary surgeon, a position he held for twenty years. It was during the early part of his term as surgeon at the hospital that Cudmore received great inspiration from Professor Watson, whose imagination and anatomical knowledge were a valuable



complement to Cudmore's unusual manual skill and accuracy. His work, and indeed his life, was based on a few sound and unassailable principles and convictions from which he never departed—imagination played but a small part in his thoughts. In his surgical operating work a faultless manual technique, combined with a good anatomical knowledge, enabled him to express his firm opinions and intentions with a rare accuracy. With a singleness of purpose and unusual imperturbability he accomplished his objects with the minimum of damage to the tissues. He was indefatigable, and his twenty years of service to the community at the Adelaide Hospital fully earned the honours of C.M.G. and K.B. that were conferred on him.

With the rank of lieutenant-colonel he served in the first European war, as a surgeon in the Australian Army Medical Corps in the Mediterranean and in Europe and Australia. For several years he was chairman of the Medical Board of South Australia. As an organizer and lecturer he did much to found the school of dentistry at the University of Adelaide and served as Dean of the Faculty of Dentistry.

One of the earliest motorists (he drove "SA 4" to the end), he was a foundation member of the Royal Automobile Association and subsequently chairman and president. In his youth a good footballer, he played a sound game of golf almost to the end of his life, and for two years he was captain at Seaton. He was devoted to duck and quail shooting and became a good field shot after discovering that his left eye was the master eye. He had a gun made by Evans in London with a goose-necked stock, which brought the barrels under his left eye while shooting from the right shoulder.

Honest and kind, a sound and trusty friend, he will long be missed by many.

Dr. E. Angas Johnson writes: Arthur Cudmore and I both went to Whinham College, where I, being a little boy, was put under his care and supervision. Then I went to the University of Adelaide, where he helped me in every way. Subsequently at the Adelaide Hospital, where he was a house surgeon, I, as a medical student, profited by his excellent teaching. Next we lodged in the same "diggings" and were students together at the London Hospital. Sir Frederick Treves was one of our teachers, as also was Professor Keith. When we had finished, we came out to South Australia, and he was appointed to an honorary position on the surgical staff at the Adelaide Hospital, and I on the medical staff. Until his death we were the last of the founders of the Saint Peter's Collegians Masonic Lodge. His passing leaves me with a deep feeling of personal loss.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Week-end Course at Bathurst.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that a week-end course will be held in the Town Hall, Bathurst, on Saturday and Sunday, May 19 and 20, 1951, in conjunction with the Western Medical Association. The programme is as follows:

Saturday, May 19: 3 p.m., "Hepatitis and Cirrhosis of the Liver", Dr. Stanley Goulston; 4.30 p.m., "Tendon Injuries", Dr. Hugh Barry.

Sunday, May 20: 10 a.m., "Medical Aspects of Peptic Ulcer", Dr. Stanley Goulston; 11.30 a.m., "Surgical Aspects of Peptic Ulcer", Dr. Vernon Barling; 2 p.m., "Principles in the Treatment of Fractures of the Lower Limbs", Dr. Hugh Barry; 3 p.m., "Polycystitis and Diverticulitis", Dr. Vernon Barling.

The fee for attendance at the course will be £2 2s. Those wishing to attend are requested to notify Dr. S. R. Dawes, Honorary Secretary, Western Medical Association, Box 240, P.O., Orange, as soon as possible.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 26, of April 26, 1951.

PERMANENT NAVAL FORCES OF THE COMMONWEALTH

(Sea-Going Forces).

Promotion.—Surgeon-Lieutenant (for short service) Albert Victor Morse is promoted to the rank of Surgeon Lieutenant-Commander (for short service), dated 4th November, 1950.

Ante-dating Seniority.—The seniority of Albert Victor Morse as Surgeon Lieutenant (for short service) is ante-dated to 4th November, 1946.

AUSTRALIAN MILITARY FORCES.

Royal Australian Army Medical Corps.

SX700032 Captain (Temporary Major) D. D. Beard relinquishes the temporary rank of Major, 7th January, 1951.

The following officers are appointed from the Reserve of Officers, and to be Captains, 14th February, 1951.—Honorary Captains SX700053 R. Barnes and SX700054 W. I. Seith.

VX 700127 Captain (Temporary Lieutenant-Colonel) E. S. R. Hughes relinquishes the temporary rank of Lieutenant-Colonel and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (3rd Military District), 15th February, 1951.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED APRIL 14, 1951.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.[2]	Australian Capital Territory.	Australia.[3]
Ankylostomiasis	*	..	1	..	..	..	..	..	1
Anthrax	*	..	..	..	..	..	..	..	..
Beriberi	*	*	*	*	*	*	..	*	..
Bilharziasis	*	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis	1	1(1)	..	..	..	..	..	..	2
Cholera	..	..	..	..	..	..	..	..	..
Coastal Fever(*a*)	*	*	..	*	*	*	*	*	..
Dengue	*	*	*	*	*	*	..	*	..
Diarrhœa (Infantile)	..	..	2	..	3(3)	..	..	..	5
Diphtheria	9(1)	2(1)	4(3)	1	6(3)	..	..	..	22
Dysentery (Amœbic)	*	..	..	..	..	..	..	..	..
Dysentery (Bacillary)	*	6(6)	..	..	2(2)	..	..	..	8
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..
Erysipelas	*	*	*	1(1)	*	*	..	..	1
Filariasis	*	..	..	..	..	..	..	..	..
Helminthiasis	*	..	*	*	*	*	*	*	..
Hydatid	*	..	*	*	..	*	*	..	..
Influenza	*	*	*	..	*	*	..	*	..
Lead Poisoning	*	*	..	*	*	*	*	*	..
Leprosy	..	..	..	..	..	..	..	..	..
Malaria(*b*)	*	..	..	..	..	..	..	..	..
Measles	*	*	*	45(5)	*	*	..	..	45
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	42(19)	2	56(20)	31(18)	..	3(2)	..	..	134
Psittacosis	*	..	*	..	*	*	*	*	..
Puerperal Fever	..	..	..	1(1)	..	..	..	..	1
Rubella(*c*)	*	*	..	*	4(2)	*	..	..	4
Scarlet Fever	7(2)	25(14)	5(2)	6(2)	3(3)	3(1)	..	..	49
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	*	1	1	*	*	*	*	*	2
Trachoma	*	..	*	*	*	*	*	*	..
Tuberculosis(*d*)	32(19)	21(16)	6(5)	1	6(4)	6(1)	..	1	73
Typhoid Fever(*e*)	..	..	..	..	2(2)	..	..	..	2
Typhus (Endemic)(*f*)	..	..	..	..	..	..	..	..	..
Undulant Fever	..	..	..	..	..	..	..	..	..
Weil's Disease(*g*)	*	*	5	*	*	*	*	*	5
Whooping Cough	*	*	*	2	*	*	..	..	2
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] The form of this table is taken from the *Official Year Book of the Commonwealth of Australia*, Number 37, 1946–1947. Figures in parentheses are those for the metropolitan area.
[2] Figures not available.
[3] Figures incomplete owing to absence of returns from the Northern Territory.
* Not notifiable.
(*a*) Includes Mossman and Sarina fevers. (*b*) Mainly relapses among servicemen infected overseas. (*c*) Notifiable disease in Queensland in females aged over fourteen years. (*d*) Includes all forms. (*e*) Includes enteric fever, paratyphoid fevers and other Salmonella infections. (*f*) Includes scrub, murine and tick typhus. (*g*) Includes leptospiroses, Weil's and para-Weil's disease.

XUM

Citizen Military Forces.

Eastern Command: Second Military District.

Royal Australian Army Medical Corps (Medical).—2/135669 Captain L. W. Middleton is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (2nd Military District), 5th January, 1951.

Southern Command: Third Military District.

Royal Australian Army Medical Corps (Medical).—4/31964 Captain G. B. Fisk is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (4th Military District), 16th January, 1951.

Tasmania Command: Sixth Military District.

Royal Australian Army Medical Corps (Medical).—6/15314 Lieutenant L. W. Knight relinquishes the provisional rank of Captain and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (6th Military District) with the honorary rank of Captain, 18th December, 1950. *To be Captains (provisionally).*—6/15224 William John Hickey, 6th February, 1951, and 6/15342 John Francis Banfield, 15th February, 1951.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps.

1st Military District.—To be Honorary Captains, 6th February, 1951.—Myles Joseph McEniery and Donald George Neill. The notification respecting Captain F. W. R. Lukin which appeared in Executive Minute No. 162 of 1947, promulgated in *Commonwealth Gazette* No. 222 of 1947, is withdrawn.

2nd Military District.—The resignation of Honorary Captain V. F. J. O'Neill of his commission is accepted, 2nd October, 1950. *To be Honorary Captain, 16th February,* 1951. —Malcolm James Deakin.

5th Military District.—The following officers are placed upon the Retired List (5th Military District), with permission to retain their rank and wear the prescribed uniform, 26th September, 1950.—Majors W. R. G. Frayne and J. B. Hogg, Honorary Majors B. C. Cohen and J. G. Hislop, and Captain D. D. McCowan.

Corrigendum.

WE have been requested by Dr. Bertram P. McCloskey to publish the following correction to his article "Report of an Investigation into an Outbreak of Poliomyelitis in a Small Town Remote from Melbourne", which was published in the issue of April 28, 1951. The sentence in lines 37 and 38 of page 618 which reads as follows: "The method of syringe sterilization used was immersion in *Spiritus Vini Methylatus*", should have read as follows: "The method of syringe sterilization was boiling of the syringes."

Medical Appointments.

Dr. R. N. Nelson has been appointed government medical officer at Ayr, Queensland.

Dr. C. H. R. James has been appointed government medical officer at Pomona, Queensland.

Dr. G. A. W. Pryor has been appointed government medical officer at Mount Isa, Queensland.

Dr. W. J. W. Close has been appointed a member of the Dental Board of South Australia, under the provisions of the *Dentists Act,* 1931-1936, of South Australia.

Dr. A. Belcher has been appointed junior medical officer of health for the Zeehan Municipality, Tasmania.

Dr. F. L. D. Young has been appointed resident medical officer for mental institutions in South Australia.

Dr. Shirley Hilda Calder has been appointed Registrar at the Mareeba Babies' Hospital, South Australia.

Dr. B. G. Thomas has been appointed officer of health to the local board of health for the district of Barmera, South Australia.

Dr. W. T. Chambers has been appointed officer of health for the district council area of Minlaton, South Australia.

Dr. C. H. Mansfield has been appointed Acting Government Medical Officer at Cairns as from May 3, 1951, during the absence of the Government Medical Officer.

Dr. Ruth Osmond has been appointed pathological assistant in the Institute of Medical and Veterinary Science, Adelaide.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Brassil, Joseph Alexis Carlin, M.B., B.S., 1951 (Univ. Sydney), Saint Joseph's Hospital, Auburn.

McKinnon, Donald James, M.B., B.S., 1951 (Univ. Sydney), Saint Vincent's Hospital, Darlinghurst.

Harrington, Jeffrey Gould, M.B., B.S., 1951 (Univ. Sydney), The Royal Newcastle Hospital, Newcastle, New South Wales.

Diary for the Month.

MAY 15.—New South Wales Branch, B.M.A.: Medical Politics Committee.
MAY 16.—Western Australian Branch, B.M.A.: General Meeting.
MAY 17.—Victorian Branch, B.M.A.: Executive Meeting.
MAY 22.—New South Wales Branch, B.M.A.: Ethics Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney)—All contract practice appointments in New South Wales.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federal Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178 North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205 Saint George's Terrace, Perth): Norseman Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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